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**H03D 3/00**(21)Application number : **06-217629**(71)Applicant : **NOKIA MOBILE PHONES LTD**(22)Date of filing : **12.09.1994**(72)Inventor : **HULKKO JAAKKO**  
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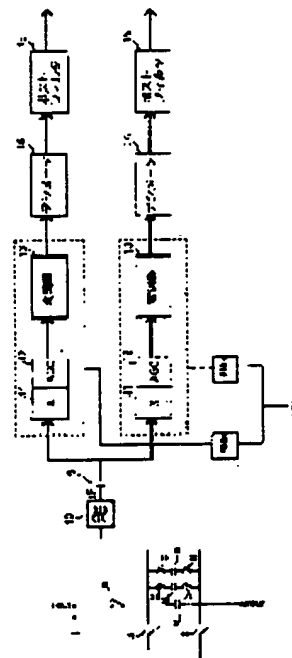
(30)Priority

Priority number : **93 933989** Priority date : **10.09.1993** Priority country : **FI****(54) RECEIVER FOR RECEIVING MODULATED CARRIER SIGNAL AND IQ MIXER/DEMODULATOR USING ITS RECEIVING CONSTITUTION**

(57)Abstract:

**PURPOSE:** To reduce the space, cost, and power consumption of a receiver by down-converting carrier frequency signals by using a temporally discrete sample extracting means.

**CONSTITUTION:** A receiver uses a sigma/delta analog/digital modulator having a wide dynamic input range and a mixer 11 in the modulator is constituted by using change-over capacitor switching elements 30-39. The elements 30-39 are driven by local oscillation signals LO1 of rectangular waves having a frequency which is equal or close to that of IF signals and give the mixer 11 a mixing function. An automatic gain controller 12 is also constituted of change-over switching elements. Consequently, the switch 31 functions as the mixer 11 and IF signals and their multiple signals are held at a fundamental frequency. Therefore, the need of a sine wave oscillator is eliminated.

**LEGAL STATUS**

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